

## ABSTRACT OF THE DISCLOSURE

A particle size distribution analyzer is provided which is capable of analysis with improved precision by canceling noise superimposed on scattering light information obtained from a test sample containing test particles to be analyzed. The particle size distribution analyzer includes: a fundamental light guide mechanism (5) operative to divide fundamental light (L) irradiated from a single light source and then guide divided fundamental lights (La and Lb) to the reference sample (RS) used as a reference and the test sample (OS), respectively; a scattering light guide mechanism (7) for guiding scattering lights (LNa and LNb) caused by irradiation of the samples (RS and OS) with the respective divided fundamental lights (La and Lb) to a light intensity detecting section (6) configured to detect the intensity of light; and an information processing section (8) for calculating a particle size distribution of the group of test particles contained in the test sample (OS) based either on a difference between fluctuations of the intensities of the respective scattering lights (LNa and LNb) detected by the light intensity detecting section (6) or on a difference between information items computed from the respective fluctuations.